

#461M (NG)  
J. Jones  
8-27-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Engelhardt et al. )  
Serial No.: 08/479,997 ) Group Art Unit: 1634  
Filed: June 7, 1995 ) Examiner: Scott W. Houtteman  
For: **OLIGO- OR POLYNUCLEOTIDES, AND OTHER** )  
**COMPOSITIONS COMPRISING PHOSPHATE-** )  
**MOIETY LABELED NUCLEOTIDES** )

527 Madison Avenue (9<sup>th</sup> Floor)  
New York, New York 10022  
August 20, 2001

**FILED BY EXPRESS MAIL**

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Attention: **Tech Center 1600**

**SECOND SUPPLEMENTAL AFTER FINAL  
UNDER 37 C.F.R. §1.116**

Dear Sirs:

This is a Second Supplemental After Final Amendment in response to the July 18, 2000 Office Action issued in connection with the above-identified application. This paper follows Applicants' January 18, 2001 Amendment Under 37 C.F.R. §1.116; Applicants' July 11, 2001 Communication; and Applicants' July 19, 2001 Supplemental After Final Amendment to Applicants' January 18, 2001 Amendment Under 37 C.F.R. §1.116. It is believed that no extension request or fee is due in connection with this paper. A Request For Extension Of Time (5 Months) and authorization for the fee therefor having been filed with Applicants' Appeal Brief. Accordingly, this Supplemental After Final Amendment is being timely filed.

Dean L. Engelhardt, et al.

Serial No.: 08/479,997

Filed: August 20, 2001

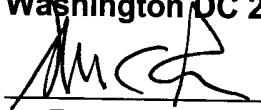
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EXPRESS MAIL CERTIFICATE

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I hereby certify that this paper and the  
attachments herein are being deposited with the  
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Office to Addressee" service under 37 CFR 1.10  
on the date indicated above and is addressed to  
the Commissioner of Patents and Trademarks,  
Washington DC 20231.



Ronald C. Fedus  
Reg. No. 32,567

AUG 20 2001

Date

**KINDLY AMEND THIS APPLICATION AS FOLLOWS:**

**In The Claims:**

Cancel claims 482-509 and 539-66.

Please amend the remaining claims as follows:

454. (Amended) An oligo- or polydeoxynucleotide that is complementary to a nucleic acid of interest or a portion thereof comprising at least one nucleotide having the formula

Sig — PM — SM — BASE

wherein PM is a phosphate moiety, SM is a sugar moiety and BASE is a base moiety selected from the group consisting of a pyrimidine, a purine and a deazapurine, or analog thereof, said PM being attached to SM, said BASE being attached to SM, and Sig being covalently attached to PM directly or through a chemical linkage, said Sig being a moiety capable of non-radioactive detection when attached to PM, when said nucleotide is incorporated into said oligo- or polydeoxynucleotide, or when said oligo- or polydeoxynucleotide is hybridized to said complementary nucleic acid of interest or a portion thereof.

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511. (Amended) An oligo- or polyribonucleotide that is complementary to a nucleic acid of interest or a portion thereof comprising at least one ribonucleotide having the formula

Sig — PM — SM — BASE

wherein PM is a phosphate moiety, SM is a sugar moiety and BASE is a moiety selected from the group consisting of a pyrimidine, a purine and a deazapurine, or analog thereof, said PM being attached to SM at a position of SM selected from the 2', 3' and 5' positions, or combinations thereof, said BASE being attached to SM, and Sig being covalently attached to PM directly or via a chemical linkage, said Sig being a moiety capable of non-radioactive detection when attached to PM, when said nucleotide is incorporated into said oligo- or polyribonucleotide, or when said oligo- or polynucleotide is hybridized to said complementary nucleic acid of interest or a portion thereof, provided that when Sig is attached through a chemical linkage to a terminal PM at the 3' position of a terminal ribonucleotide, said chemical linkage is not a cleaved 3' terminal ribonucleotide previously attached to said oligo- or polyribonucleotide.

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